

FACILITY GUIDE FOR THE NURSING HOME QUALITY INDICATORS

National Data System

September 28, 1999

Center for Health Systems Research and Analysis, University of Wisconsin - Madison

The Facility Guide for the Nursing Home Quality Indicators (the "Guide") was developed at the Center for Health Systems Research and Analysis' (CHSRA) by the Nursing Home Quality Indicators Development Group (the "NHQIDG") with support from the Health Care Financing Administration. CHSRA and the NHQIDG is associated with the University of Wisconsin-Madison.

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Facility Manual

Welcome to the MDS-based quality indicator (QI) system. This manual is intended as a guide for using QI reports in the national analytic reporting system. It is also intended as an introduction to:

- how a facility will access reports from the national standard reporting system;
- how a facility can use QI Reports to help focus their internal quality improvement efforts; and
- how the State survey agency will use QI Reports in the survey process.

Overview

In 1989, the Health Care Financing Administration (HCFA), Office of Research and Demonstrations (ORD) funded the Multistate Nursing Home Case Mix and Quality Demonstration (NHCMQ). This project built upon past and current initiatives with case mix payment and quality assurance in nursing homes. The purpose of the demonstration was to test the use of a resident information system to classify residents into homogeneous groups for equitable prospective payment and to monitor the quality of both the process and outcomes of care.

With the reimbursement systems well under way in the demonstration states and with the implementation of the revised survey process as of July 1, 1995, attention was then focused on utilizing the Quality Indicators to advance a system of monitoring quality appropriately called the Quality Monitoring System (QMS). In addition, with MDS Version 2.0 now in use, the national data system can be tested, refined, and implemented.

CHSRA has had the primary responsibility for developing the quality component of this project. This component has four phases: (1) the development of a set of Quality Indicators (QIs) based on resident assessment information, (2) the development of a national analytic reporting system utilizing the QIs, (3) the development of a system for incorporating the QIs in the nursing home survey process, and (4) the training and implementation of this system.

Since December of 1990, Phase 1 (QI Development) has been an ongoing effort of analysis, testing, and validation by CHSRA, project staff, and various expert panels. From an initial set of 175, the QIs have been reduced to an "active" set of 24 QIs based on the MDS Version 2.0. (Note: The reduced set of MDS items on the standard two-page MDS 2.0 quarterly form only allows definition of 24 of the original 30 QIs based on the MDS+ instrument).

The set of QIs based on MDS Version 2.0 covers the following domains, or broad areas of care:

Accidents	Nutrition/Eating
Behavior/Emotional Patterns	Physical Functioning
Clinical Management	Psychotropic Drug Use
Cognitive Patterns	Quality of Life
Elimination/Incontinence	Skin Care
Infection Control	

These areas or "domains" do not represent every care category or situation that could occur in the long-term care setting, but they do represent common conditions and important aspects of care and life to residents. The QIs are also closely affiliated with the Resident Assessment Protocols (RAPs) component of the Resident Assessment Instrument (RAI).

Use of the QIs and QI reports in the survey process offers an additional source of information from which surveyors or supervisory staff may make planning decisions about the survey of a facility and from which a facility staff can plan their internal quality improvements initiatives. The QIs and QI reports are not to be considered as a single source of information but should be used in conjunction with all pertinent information about a facility.

Changes to the Manual and Reporting System

In this September 28, 1999 Users Guide release you will find a few changes. The principal changes are:

- inclusion of this section;
- a discussion of the Data Submission Summary report;
- minor wording changes regarding the steps necessary to access the reporting system.

There were no changes to the sections labeled “Steps in the Facility QI Review Process”, “Use of QI Reports in the Survey Process” or the Appendix A “QI Matrix”. If you are already familiar with the prior versions of this guide (May 1999 or June 1999), you may wish to skip to page 25 to review the discussion of two new reports. The principal change in the June release was the inclusion of Table 1 and associated text shown on page 19 of this manual.

Near the end of September 1999 there will be some software changes made to the Analytic Reporting System. These changes were made to correct an error in one QI calculation and an error in the calculation of the comparison group averages. Once the software upgrade takes place, all earlier QI reports existing on the system will be removed. Further, if you try to replicate a report that had been run earlier, you would find that comparison group averages and rankings to be slightly different. In addition, some of the facility averages represented on the Facility Characteristics report will change. **The Facility QI Profile numerator, denominator and percentage should not be different with the exception to the denominator and facility average for Incidence of Fractures.**

More specifically, the changes implemented in the September update include:

Database Changes

- Changes made to database procedures to improve the efficiency of Quality Indicator and related calculations, and to correct problems with the way calculations were being performed when assessments were submitted out of sequence. As a result, all calculations have been updated for all assessments in the database.
- The Accidents domain QI 2, Incidence of Fractures, was not using the proper denominator definition and was therefore overstating the number of residents in the denominator. This has been corrected to actually reflect the definition in the Quality Indicator Matrix (see Appendix A)
- Changes have been made to database procedures to correct problems in the way comparison group statistics were being calculated. Because of these problems and the updated calculations as noted above, existing comparison group statistics were dropped and re-calculated for all time periods. This should result in differences in comparison group averages and facility rankings as compared to other facilities in the state.

Reporting System Changes

- The letter-size Resident Summary Report has been modified to include more descriptive column headers, full resident names and reasons for assessment (AA8A/AA8B), and a check indicating that a resident was discharged during the report period. In addition, the legal-size Resident Summary Report has been removed, as it was confusing to many to have two reports with the same information but with different page size formats.
- A new Resident Listing report has been added which shows resident name, date of birth, Social Security Number (SSN), Medicare number, room number, assessment dates and reasons for assessments used in the QI calculations, and discharge date if the resident was discharged during the report period.
- A new Assessment Summary report was added to display the number and type of assessments in the state MDS system for your facility. This report uses the assessment reference date (MDS item A3a) to group the assessment counts by month.
- The Reporting System interface has been modified so as to open fewer new browser windows.
- Because of the extensive re-calculations performed by this update, all existing report requests have been removed. To request reports on a time period other than the preset default option, select the Custom Settings option in the Analytic Reports Applet Window and enter new report period begin and end dates.

How To Access Reports

There are several necessary systems requirements/specifications that you must meet in order to access reports from the analytic reporting system. At minimum, you must have a computer system connected to the state HCFA MDS system:

- With 12 or more megabytes of memory (we recommend increasing memory to at least 16 megabytes as the best way to improve performance if you have a 486 or better PC.);
- With Windows 95, Windows 98 or Windows NT (It is possible to use a computer with Windows 3.1 to request and view reports, but it is not recommended and you will need to have the most up to date browser available.);
- Connected to the state HCFA MDS system via a web browser (the reports are **not** available from the Internet – only from the state MDS system);
- With a Java-enabled web browser using either Netscape Versions 3.0 or higher, or Internet Explorer Versions 3.0 or higher (We suggest that you read the ***Important Note*** at the end of this section of the manual for any particular known idiosyncrasies of web browsers); and
- With Adobe Acrobat Reader (This software is available completely free of charge and is a world-wide standard for viewing documents with web browsers.) For more information you can visit Adobe's Web site at <http://www.adobe.com/>

If your system meets the above requirements you should be able to access reports through your web browser. In brief, the process requires you to select the reports you want to see and submit an electronic request for them. The MDS system at the state will process your request and

generate the reports you request in real time. Once the reports are completed, your browser will display a hyperlink to the completed reports. The reports can then be viewed on-line, printed, and even saved as a file on your local computer. Below we give a step-by-step description of how to request and view reports. We have provided "screen shots" of each of the screens that are used in the report access process.

If this is your first time to access the system, make sure to visit and review the information in the “First-time Users” link. Also download and install Adobe Acrobat 3.02 on your computer if it is not already installed.

Step 1:

From the system you use to connect to your states system for MDS data submission, connect to the states MDS system and view the home page with Netscape or Internet Explorer web browser. You should see a home page similar to Figure 1 below. You will note that a new hyperlink appears on the home page titled “**Analytic Reports**”. This link will guide you to the proper page on the MDS system to request Quality Indicator (QI) reports for your facility. Note that you can only access the QI reports from the MDS system – you can not access them from the Internet. If the hyperlink to “**Analytic Reports**” is not apparent, it is likely that your state has not completed the installation of the reporting component.

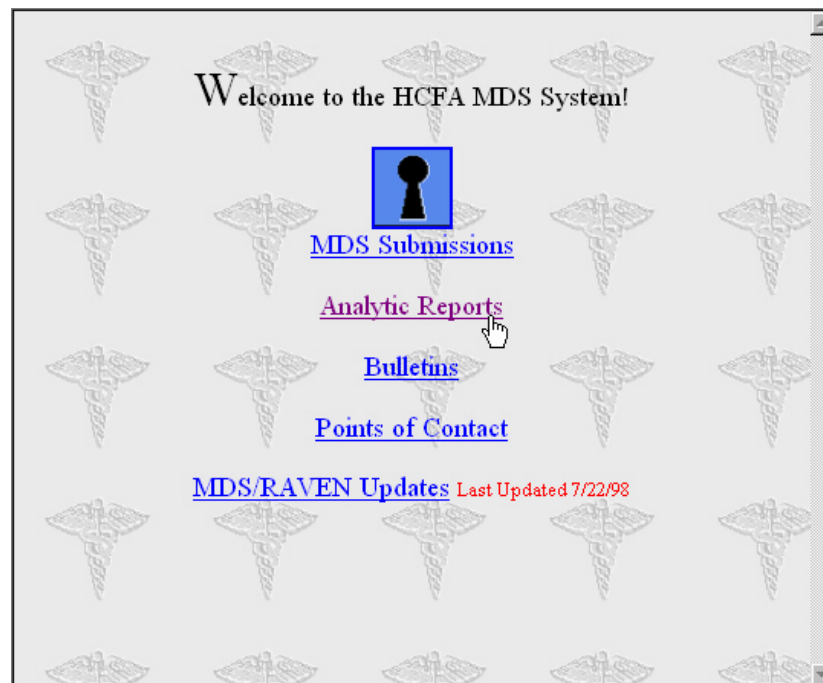


Figure 1: MDS Home Page

Once you click on the “**Analytic Reports**” link, you will be required to provide the authorized **User Name** and **Password** used to submit data to gain entry to the reporting system. Please protect these identifiers and passwords since they allow full access to facility and resident level information.

Step 2:

When you are authorized, your screen will display the "Home Page" entitled **Provider Feedback Reporting System** as shown in Figure 2 below. The two links you will use most often on the home page are:

- ⇒ A **Request Report** button that is the starting point for the QI report request process described in detail beginning in the step 3 below.
- ⇒ **Already Requested Reports** - This is a hyperlink that takes your browser to a display listing of all reports requested that you have requested in the past. The listing also indicates the status of those request (completed; failed; cancelled; pending) (refer to step 9 below). Clicking on any of the briefly listed previous requests will take your browser to a page that describes the reports in the request more completely. In addition, you will be able to click on a hyperlink to a previously requested report that will load the report so you can see, print and even save the report to your local computer.
- ⇒ **The Home Page also includes links to Links to Other Useful Information** including:
 - What's New – A location that will explain any recent changes made to the Analytic reporting system.
 - **User Guide** - This option provides an on-line version of this manual. The manual is available in Adobe Acrobat format as well as in Microsoft Word 97 format. The Word formatted document displays the figures much more clearly than the Acrobat version. The same manuals are also available under the hyperlink "**First Time Users**".
 - **First-Time Users** - This option provides information about necessary systems requirements needed to access reports. We have provided much of this information in this manual. This link also includes links to download the **Adobe Acrobat** and Microsoft Word Viewer programs.
 - **Known Problems** - This option lists identified problems with various web browser options. If you are having problems, try looking at this link to see if your questions have already been answered. Again, we have provided this information later in this document.

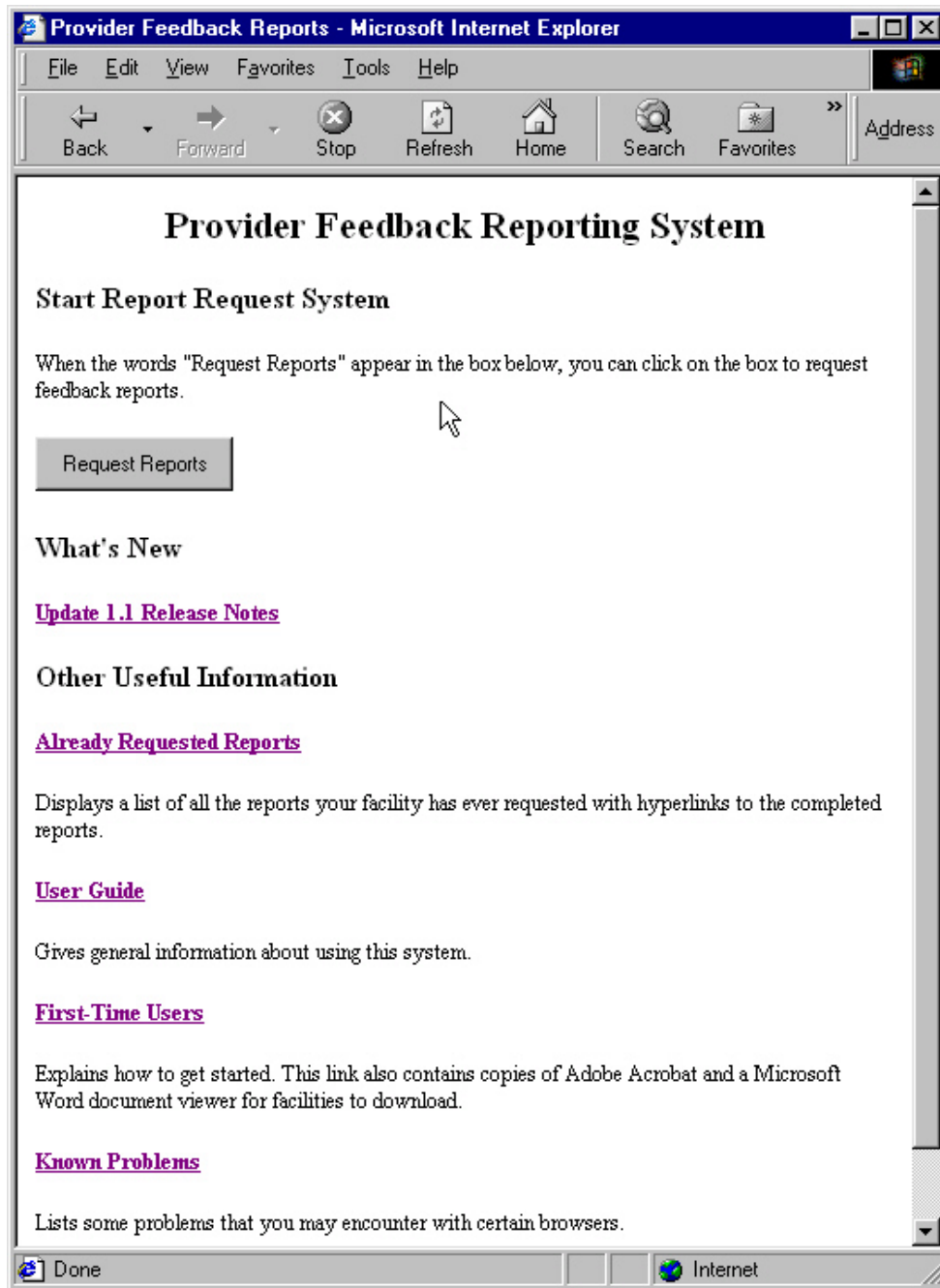


Figure 2: Provider Feedback Reporting System

Step 3:

If you choose to request reports, you should click on the box "Request Reports" under the **Start Report Request System** option on the home page. If you do not see a small box with labeled "Request Report" then your browser may not support JAVA. Note that Microsoft's Internet Explorer 4.0 (4.71.1712.6) does not properly support JAVA. Click on your browsers Help menu and choose "about..." to see your browsers complete version number.

Step 4:

Your browser will then display a new window that will contain a program to help you select the reports you might like to display (please see Figure 3 below). This JAVA applet program will also allow you to change some of the default settings for the various reports if you should so desire.

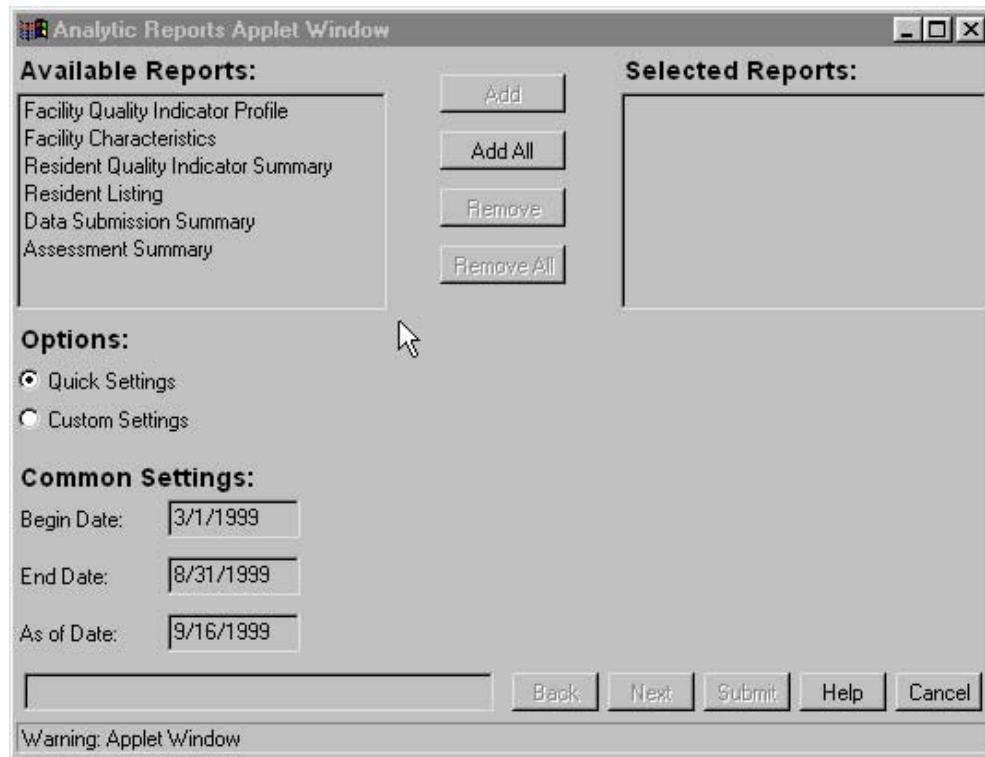


Figure 3: Initial Report Selection Applet

Step 5:

In the upper left section of the Analytic Reports Applet Window titled **Available Reports**, all possible reports you may wish to access are arrayed. By clicking on one or more reports and clicking the **Add** button, the selected reports are moved to the **Selected Reports** box indicating that these report types have been selected. The **Add All** button may be used to move all available reports to the "**Selected Reports**" side. Figure 4 below shows an example where a number of reports have been selected for submission. Reports you have selected can be removed by clicking on them in the **Selected Reports** box and then removing them individually (use **Remove** button) or as a group (use **Remove All** button).

You may also click on either **Quick Settings** or **Custom Settings**. **Quick Settings** sets all reports to a standard set of parameters such as the report period begin and end dates in the **Common Settings** section. Click on **Custom Settings** to change parameters such as the **Common Settings** begin and end report period dates.

Once you have completed selection of the report types you then click on the **Next** button of the window to continue the report process. You may also click the **Back** button to return to the previous page, the **Cancel** button to stop the process or the **Help** button for additional assistance.

The screenshot shows the 'Analytic Reports Applet Window' with a blue title bar. It is divided into several sections:

- Available Reports:** A list box containing 'Data Submission Summary'.
- Buttons:** 'Add', 'Add All', 'Remove', and 'Remove All' are positioned between the available and selected reports.
- Selected Reports:** A list box containing 'Facility Characteristics', 'Facility Quality Indicator Profile', 'Resident Quality Indicator Summary', 'Resident Listing', and 'Assessment Summary' (which is highlighted).
- Options:** Radio buttons for 'Quick Settings' and 'Custom Settings' (which is selected).
- Assessment Summary Report:** A section with a 'Summary Period' of '6' months, with a note '(going back from today)'.
- Common Settings:** Three date input fields: 'Begin Date' (3/1/1999), 'End Date' (8/31/1999), and 'As of Date' (9/16/1999).
- Navigation Buttons:** 'Back', 'Next', 'Submit', 'Help', and 'Cancel' are at the bottom right.
- Status Bar:** A warning message 'Warning: Applet Window' is displayed at the bottom left.

Figure 4: Select Reports and Choose Settings

Step 6:

If you clicked the **Next** button in [Step 5](#), a window entitled **Currently Waiting for Execution** will appear (Figure 5). This window gives the status of your report request. At the top of the window the number of current assessment submissions being processed and the number of **report requests** submitted are displayed. This may assist you in making a decision about whether to **Display the reports online** (click this button) or **Run reports to see later** (click this button). If there are more than 8 requests in queue, you will not be allowed to select the **Display the reports online** option. If that occurs, go ahead and submit your report for processing and check back later in the day using the **Already Requested Reports** link on the Analytic Reports home page to locate your report.

Once you have decided whether you want to Display the reports online or Run reports to see later you then click on the **Next** button of the window to continue the report process. You may also click the **Back** button to return to the previous page, the **Cancel** button to stop the process or the **Help** button for additional assistance.

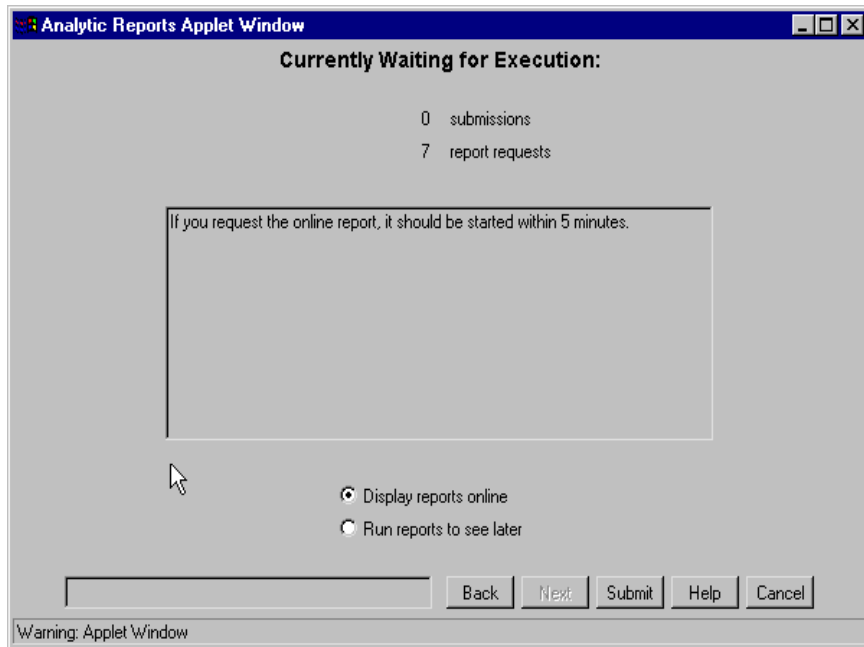


Figure 5: Submit Report Request to the System

Step 7:

If you clicked the **Submit** button in [Step 6](#), a window will appear briefly, that informs you that your report request to see reports on-line was accepted by the system and that your report should begin processing soon. **Figure 6: Request is in Queue** below shows an example of this screen. If you do not want to wait for your reports to be available, you may close this window at any time, close the browser, or even disconnect from the submission system. Your report request will continue processing normally and you can access it easily when you return to the reporting system by clicking the **Already Requested Reports** link. You can also press the “Cancel Request” key to halt the submission and processing of your report request.

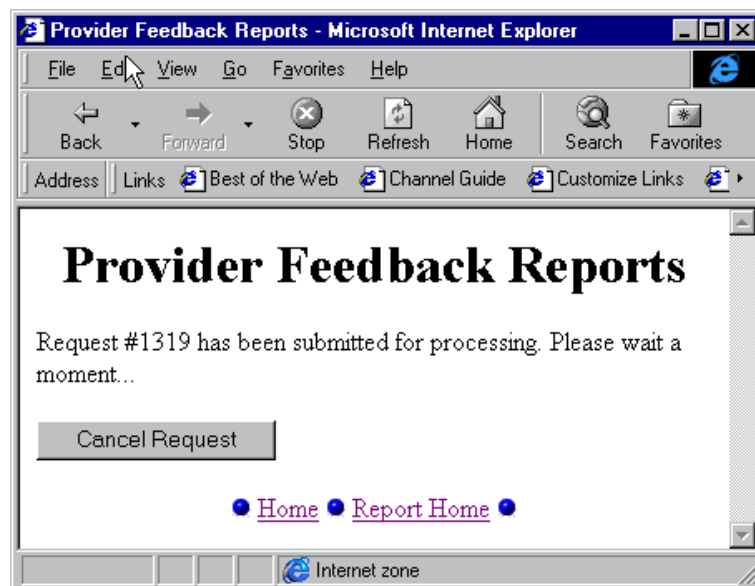


Figure 6: Request is in Queue

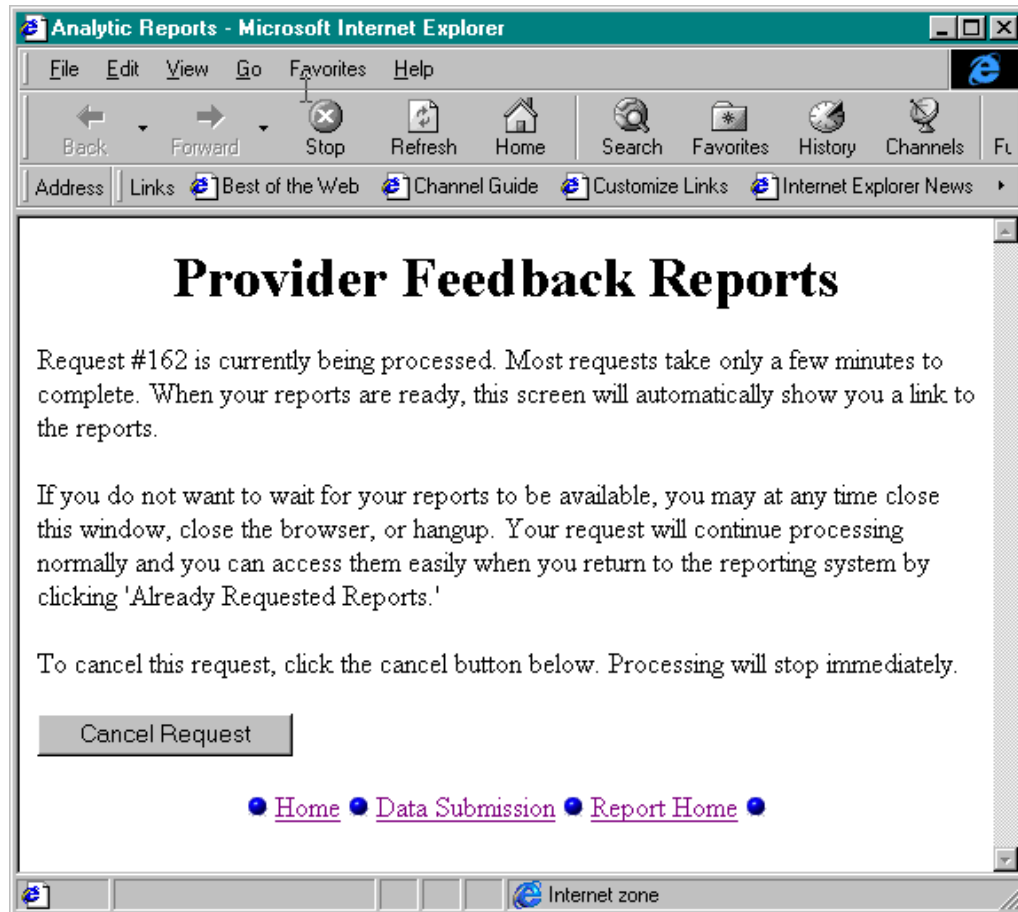


Figure 7: Report Request is Being Processed

Step 8:

Once your report begins processing, your browser window will display the screen in **Figure 7: Report Request is Being Processed** (above). At this time your report is being constructed and should be complete shortly. The length of time varies depending on the number of facilities selected and the number of reports requested.

Step 9:

Next a **Requested Reports** window will appear listing the reports you have requested for particular facilities (see Figure 8 below). If you click a report hyperlink, the report will then be displayed (examples of reports are in Appendix B). With the September 1999 software update, both Microsoft Internet Explorer and Netscape browsers will be start up the Adobe Acrobat browser plug-in and then display the reports that were run. Note that even though the web page displayed several different links, clicking on any one of the links loads all the reports into the acrobat display for easy viewing, printing, or saving to a local file. A particular idiosyncrasy of Netscape is that Netscape will crash if you choose the File...Print... method to print reports displayed by Acrobat. With Netscape versions lower than 4.5 you must use the **Print** icon on the Acrobat menu bar.

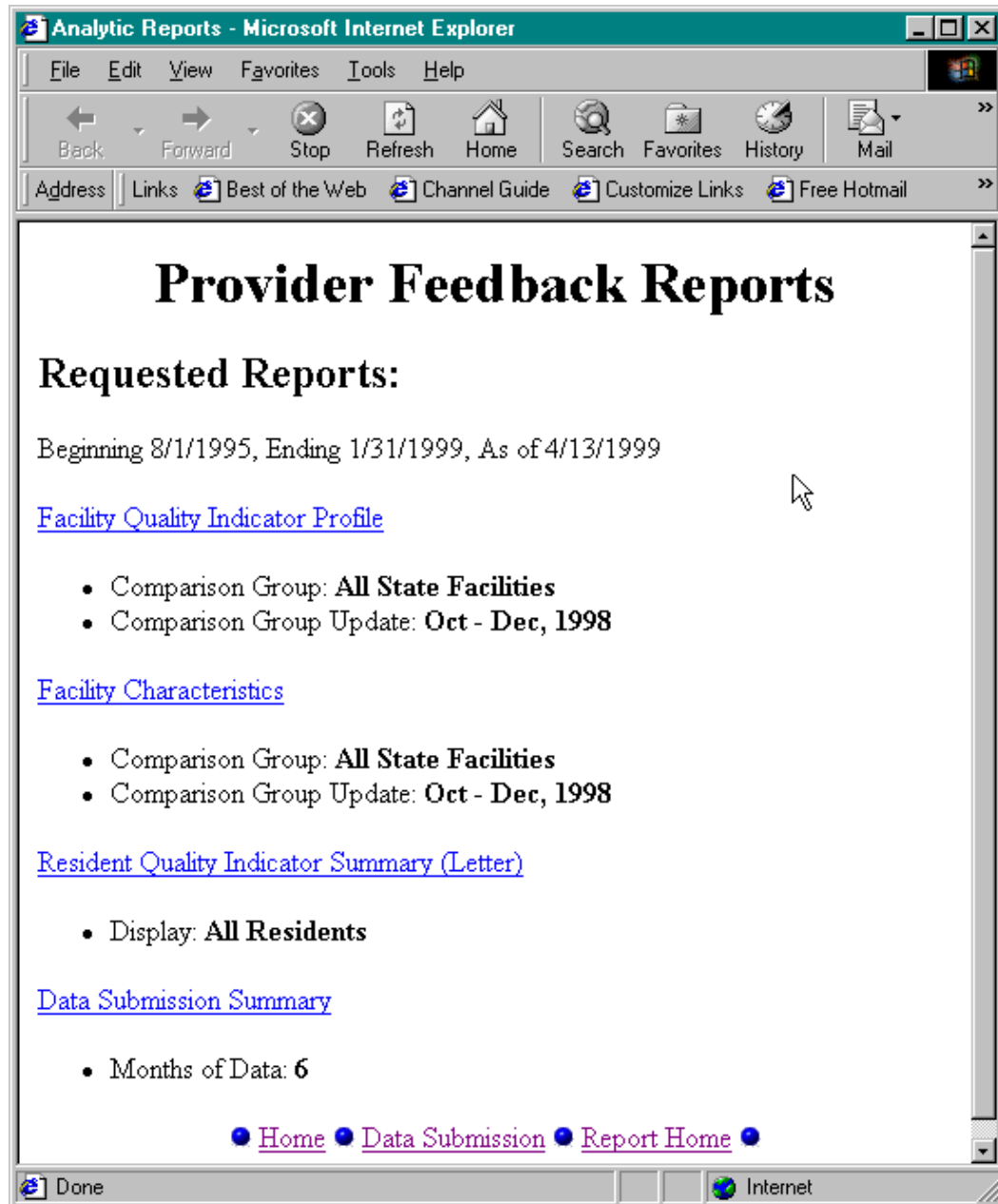


Figure 8: Reports Completed with Hyperlinks

Step 10.

To view reports that you requested at some earlier time, browse the Analytic Reports home page and choose the “**Already Requested Reports**” hyperlink. Your browser will then display a page similar to the one shown in figure 9 below. This page will contain a link to each of the report requests you have ever asked for. By clicking on the underlined request number, your browser will display the same type of information as show in Figure 8 above. Further, clicking on one of the underlined report links, your browser will load Acrobat and display the reports in that request.

The Reporting system maintains the actual physical report files for a period of 30 days. After that time, the report file is removed from the system. When you select such a report from the Already Requested Reports link, your browser will display a page similar to Figure 8. However, there will be a notice that the report files have been deleted along with a button labeled “Recreate Reports”. Clicking that button will cause the Reporting system to generate a duplicate of the report originally requested. The newly created report will **not** display any data for assessment data transmitted on or after the report request “As of Date” shown on the report. Also, the report begin and end dates will be exactly the same as they were on the original report.

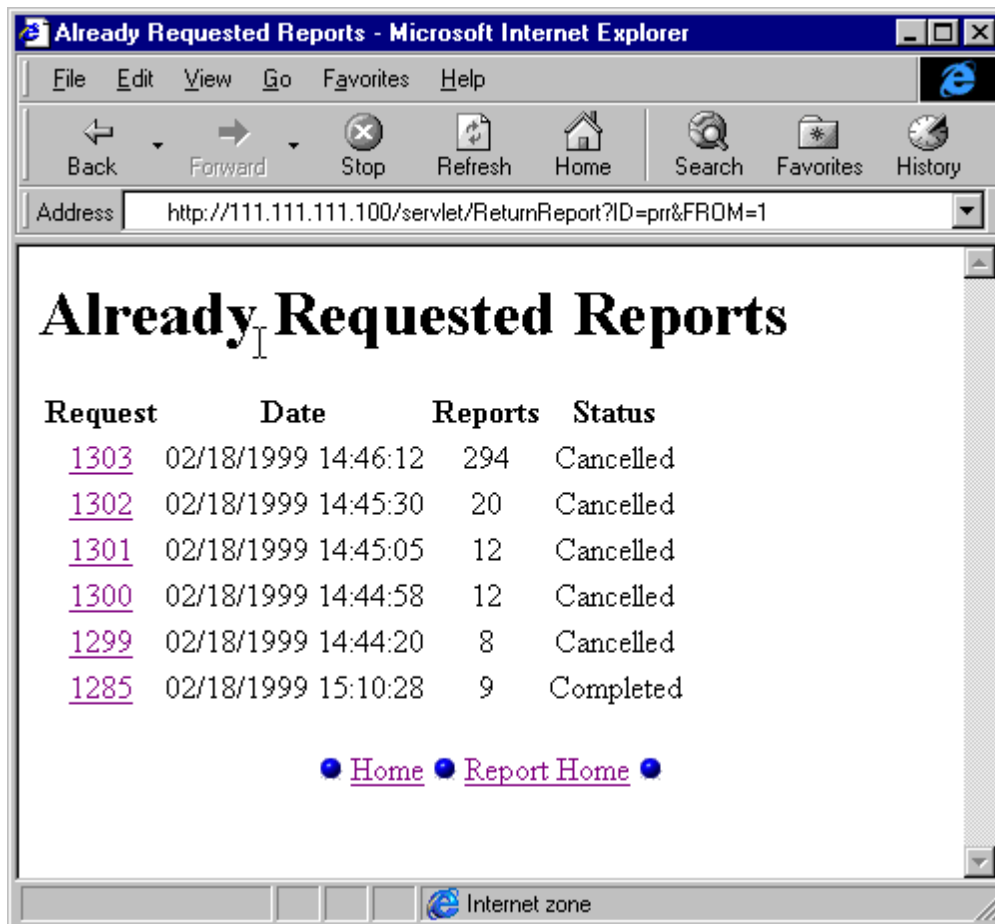


Figure 9: Already Requested Reports

Important Note: Unfortunately, each version of each browser has a slightly different behavior under otherwise identical conditions and despite our best efforts, we are left with a few bugs. Several problems occurring in the Java "Analytic Reports Applet Window" can be solved by closing the applet window and then selecting the "Request Report" box on the report home page. Specific browser problems include:

Netscape	Microsoft
<p>Netscape 4.x Problem: When trying to print a report that is displayed on the screen (view online reports option), you get a window saying "This program has performed an illegal operation and will be shut down." and Netscape crashes. This will occur whenever you try to print a report using the "File" menu "Print" command. Workaround: When you are going to print a report that is displayed, always click the printer Icon on the toolbar. It is the very first Icon on the toolbar right above the area of the screen displaying the actual report. This problem is solved in version 4.51</p>	<p>Microsoft Internet Explorer 3.02 Problem: Acrobat Reader does not display the PDF files. Workaround: Save the PDF file to disk with an extension of pdf (e.g., report1.pdf) and double click the file from Explorer or a file manager. Upgrade to a more recent release of Internet Explorer or Netscape.</p>
<p>Netscape 3.0 Gold Problem: After clicking on a link to view a completed feedback report, a new window appears briefly and then disappears. The window that is displaying the report is in the background behind the "Provider Feedback Reports" window. Workaround: Minimize the "Provider Feedback Reports" window or use Alt+Tab to find the new window. This is solved with September QI Patch.</p>	<p>Microsoft Internet Explorer 4.0 (4.71.1712.6) Problem: Does not support Java. The words "Request Reports" never appear in the box below "Start Report Request System" on the Report Home Page. Workaround: Upgrade to IE 4.01 or Netscape 4.0.</p>
<p>Netscape 3.01 Problem: When choosing reports to see on the "Analytic Reports Applet Window" there is a problem when you choose "Remove" a report from the "Report On" list. Removing a report causes all reports remaining on the list to become invisible. Workaround: Click on the Selected list, or add another report, or close applet and restart.</p>	<p>Microsoft Internet Explorer 4.01 Problem: When choosing reports on the "Analytic Reports Applet Window" there is an occasional problem when removing reports one at a time after one has chosen the next button, and then chooses the back button to add more reports to the list. At this point, it appears that you can not remove reports from the list of selected ones. The display gets a little confused and shows reports that have been removed. Workaround: Close and restart the Applet by clicking the "Request Report" box on the report home page.</p>
<p>Netscape 4.x with Java 1.1 patch Problem: After submitting a report, the window with the "Provider Feedback Reporting System" home page hides the new window that comes up. Workaround: Minimize the "Provider Feedback Reporting System" window or use Alt+Tab to find the new window.</p>	

Key Concepts And Terms

The following are important terms and concepts that are necessary to understand before the QIs can be interpreted correctly.

DENOMINATOR: The number of facility residents who could have the QI.

GENERAL INDICATORS: Quality Indicators for which some occurrence in the facility is expected. (For example, Prevalence of Bladder or Bowel Incontinence or Prevalence of Pressure Ulcers that occur in a High Risk population.)

INCIDENCE: The QI type that provides a description of what new conditions have developed over the course of the last two assessments. It is used to show the development of conditions for a single resident, or for the facility. Note that resident who do not have a previous assessment will be excluded from incidence QIs. Also, pay careful attention to the denominator definitions as resident that meet the QI flagging criteria on the previous assessment are excluded from the QI calculation. Last, note that the Decline in ROM and Incidence of Late Loss ADLs exclude residents whose previous assessment indicates that no further decline is possible.

NUMERATOR: The actual number of residents who flagged on the QI. These are the residents who “have” the QI.

PERCENTILE RANK: A means of ranking facilities based on how they compare with each other on each separate QI. Facilities that rank very high, that is, they are at a high percentile, will “flag” on a specific QI. The higher the percentile, the more potential for a care concern in the facility.

PREVALENCE: The QI type that gives a point in time measure. Most of the QIs are prevalence measures. They provide the facility with the percentage of residents who flagged on a QI, on the basis of their “current” assessment.

RISK GROUPS: An assessment of the likelihood that a resident will develop the condition expected in the QI is incorporated into the QI itself. The results are QIs that flag for both those persons identified at HIGH risk and all others (LOW RISK). This concept has implications for assessing how facilities intervene with residents who are vulnerable to certain conditions and how they intervene with residents who are not vulnerable.

SENTINEL HEALTH EVENTS: Quality Indicators that should occur very infrequently, if at all, in a facility. The nature of these indicators is serious enough to warrant investigation if it occurs only once or twice. (For example, Prevalence of Fecal Impaction, Prevalence of Dehydration, or Prevalence of Pressure Ulcers occurring in a Low Risk population.)

THRESHOLDS: A set point for each QI at which the likelihood of a problem is sufficient to warrant emphasis or at least further investigation by the facility or by a survey team.

A Quick Guide to the QIs

The following is intended for use as a quick guide to the QIs. It does not offer the complete definition(s) and descriptions found in the QI matrix (Appendix A). It is intended as a ready reference. It is important to note that, for all Prevalence QIs, the data come from the most recent assessment in the data file¹. For the Incidence QIs, the data come from both the most recent assessment and the assessment immediately previous to it. Incidence QIs look at the development of an event or situation across two assessment periods.

It is also important to remember that Risk Adjustment is crucial to how you interpret a QI, and how you go about assessing a facility's response to a resident who is at HIGH RISK versus one who is at LOW RISK.

QI 1 Incidence of new fractures

Residents who have a hip fracture or other fracture that are new since the last assessment. This QI is not risk adjusted and the denominator is all residents who did not have a fracture on the previous assessment.

QI 2 Prevalence of falls

Residents who have been coded with a fall within the time frame of the most recent assessment (past 30 days). This QI is not risk adjusted and the denominator is all residents².

QI 3 Prevalence of behavioral symptoms affecting others

Residents who have displayed behaviors affecting others on the most recent assessment. Behavioral symptoms are defined as verbal abuse, physical abuse, or socially inappropriate/disruptive behavior. The behavior has had to occur at least once in the assessment period (7 days).

This QI is RISK ADJUSTED. Residents are considered more likely (are at HIGH RISK) to exhibit behavioral symptoms if they are cognitively impaired on the most recent assessment or have diagnoses of manic depression or psychotic disorders on the most recent or on the most recent FULL assessment (See Footnote 1). Residents who do not have any of these conditions are at LOW RISK.

¹ For QIs 3, 19, and 20 which have exclusions or risk adjustments that include individuals with psychotic or related diagnoses or manic depression, some data related to these diagnoses is carried forward from the last full assessment, if the assessment was a quarterly assessment.

² Technically, not all residents are included in the QI calculation for the Facility Quality Indicator Profile report. The calculations exclude those residents whose current/most recent assessment is an admission assessment, since it is unlikely the QI condition they have was acquired in the facility. For a description of which assessments are used in calculation of the various QI reports see TABLE 1 on Page 20.

QI 4 Prevalence of symptoms of depression

Residents with symptoms of depression on the most recent assessment. This is a complex definition. Residents are considered to have this QI if they have a sad mood and have 2 or more symptoms of functional depression (defined below).

The symptoms of functional depression that are used in deciding whether a person meets one of these criteria are also complex. There are five symptoms, and some involve more than one item. These symptoms occurring within the most recent assessment period are: (1) negative statements exhibited up to 5 days or more per week; (2) agitation or withdrawal exhibited up to 5 days or more per week, or resists care at least 1-3 days in the last 7 days, or withdrawal from activities or reduced social activity exhibited up to 5 days or more per week; (3) waking with an unpleasant mood up to 5 days or more per week, or not being awake most of the day and not comatose; (4) being suicidal or having recurrent thoughts of death up to 5 days or more per week; and (5) weight loss. This QI is not risk adjusted and the denominator is all residents on the most recent assessment.

QI 5 Prevalence of depression with no antidepressant therapy

Residents with symptoms of depression and no antidepressant therapy on the most recent assessment. Symptoms of depression are defined using the same criteria described in the previous QI and no antidepressant therapy was provided. This QI is not risk adjusted and the denominator is all residents.

QI 6 Use of 9 or more different medications

Residents who received 9 or more different medications on the most recent assessment. This QI is not risk adjusted and the denominator is all residents on the most recent assessment.

QI 7 Incidence of cognitive impairment

This QI identifies those residents who were not cognitively impaired on the previous assessment, but who are cognitively impaired on their most recent assessment. Cognitive impairment is defined as having impaired decision-making abilities, and short term memory problems. The denominator is only those residents who were not cognitively impaired on the previous assessment. This QI is not risk adjusted.

QI 8 Prevalence of bladder or bowel incontinence

Residents who were determined to be incontinent or frequently incontinent on the most recent assessment. The denominator for this QI does not count those people who were comatose, had indwelling catheters, or ostomies on the most recent assessment.

This QI is RISK ADJUSTED. Residents are considered more likely to be incontinent if they have severe cognitive impairment or are totally dependent (self-performance) in ADLs having to do with mobility (bed mobility, transfer, and locomotion). These residents are at HIGH RISK for incontinence. Residents who do not have these conditions and are not excluded from the QI are considered LOW RISK.

QI 9 Prevalence of occasional or frequent bladder or bowel incontinence without a toileting plan

Residents who are assessed as incontinent, either occasionally or frequently, and who do not have a toileting plan noted on the most recent assessment. In this case, the denominator would be those residents who are coded with frequent or occasional incontinence on the current

assessment. This QI is not risk adjusted.

QI 10 Prevalence of indwelling catheters

Residents noted to have an indwelling catheter on their most recent assessment. The denominator is all residents.

QI 11 Prevalence of Fecal Impaction

Residents who have been noted with fecal impaction on their most recent assessment. This QI is considered to be a *sentinel health event*, meaning that even if one person has this QI, it is of sufficient concern to require a review. This QI is not risk adjusted and the denominator is all residents.

QI 12 Prevalence of urinary tract infections

Residents identified on the most recent assessment as having had a urinary tract infection. This QI is not risk adjusted and the denominator is all residents.

QI 13 Prevalence of weight loss

Residents noted with a weight loss (5% or more in the last 30 days or 10% or more in the last 6 months) on the most recent assessment. This QI is not risk adjusted and the denominator is all residents.

QI 14 Prevalence of tube feeding

Residents noted with a feeding tube on the most recent assessment. This QI is not risk adjusted and the denominator is all residents.

QI 15 Prevalence of dehydration

Residents who have been coded with condition of dehydration (MDS check box) or with a diagnosis of dehydration (MDS ICD-9 CM 276.5). This QI is not risk adjusted and the denominator is all residents. This QI is considered a *sentinel health event*.

QI 16 Prevalence of bedfast residents

Residents determined to be bedfast on the most recent assessment. This QI is not risk adjusted and the denominator is all residents. The definition of bedfast is very specific and is found in the RAI Manual.

QI 17 Incidence of decline in late-loss ADLs

A decline in ADL functioning (self-performance) over two assessment periods - the most recent and the assessment immediately prior. Late-loss ADLs are those considered the “last” to decline or deteriorate (i.e., bed mobility, transferring, eating, and toileting). Over the assessment periods, there has been a one level decline in at least two of these ADLs OR there has been a two level decline in one of them. In other words, the resident has experienced a gradual decline in two or more areas or has experienced a rather significant decline in one.

The denominator does not include residents who already were determined to be totally dependent or comatose on the previous assessment. This QI is not risk adjusted.

QI 18 Incidence of decline in ROM

Residents who have had an increase in functional limitation in Range of Motion (ROM) between the previous and most recent assessments.

This QI includes only residents with the previous and most recent assessments on file, with the exclusion of residents with maximal loss of ROM on the previous assessment.

QI 19 Prevalence of antipsychotic use in the absence of psychotic or related conditions

Residents who are receiving antipsychotics on the most recent assessment. The denominator for this QI excludes those residents who have psychotic disorders, Tourette's, or Huntington's on the most recent assessment (See Footnote 1) or on the most recent FULL assessment or those with hallucinations on the most recent assessment.

This QI is RISK ADJUSTED. Residents who exhibit both cognitive impairment and behavior problems the most recent assessment are considered at HIGH RISK to receive antipsychotic medication(s). All others (except those excluded) are considered at LOW RISK.

QI 20 Prevalence of any antianxiety/hypnotic use

Residents who received antianxiety medication(s) or hypnotic(s) on the most recent assessment. The denominator for this QI excludes those residents with one or more psychotic disorders, Tourette's or Huntington's on the most recent assessment or the most recent FULL assessment (See Footnote 1) or those with hallucinations on the most recent assessment. This QI is not risk adjusted.

QI 21 Prevalence of hypnotic use more than two times in the last week

Residents who received hypnotics more than twice in the last week on the most recent assessment. This QI is not risk adjusted and the denominator is all residents on the most recent assessment.

QI 22 Prevalence of daily physical restraints

Residents who were restrained (trunk, limb, or chair) on a daily basis on the most recent assessment. This QI is not risk adjusted and the denominator is all residents on the most recent assessment.

QI 23 Prevalence of little or no activity

Residents who, on the most recent assessment, were noted with little or no activity. The denominator includes all residents, except those who are comatose. This QI is not risk adjusted.

QI 24 Prevalence of Stage 1-4 pressure ulcers

Residents who have been assessed with a pressure ulcer(s) Stage 1-4 on the most recent assessment--either in the coding area for pressure ulcers or with an ICD-9 code. The denominator is all residents on the most recent assessment.

This QI is RISK ADJUSTED. Residents are considered HIGH RISK for the development of pressure ulcers if they have any one or more of the following conditions: they are impaired for bed mobility or transfer; or are comatose; or have malnutrition; or have an end stage disease on the most recent assessment. All other residents are considered to be LOW RISK. Residents at low risk that flag should be reviewed since this would be considered a *sentinel health event*.

Summary of QI Report Use In Facility Quality Assurance/Quality Improvement Processes

The primary use of the QI reports by facilities will be to:

- Identify any potential areas of concern to focus quality assurance(QA)/quality improvement(QI) activities; and
- Identify and select a resident sample for a QA/QI review.

The assessments used in the calculation of the various QI reports are based on the **Reasons for Assessment** as identified in **Section A8a. (Primary reason for assessment)** of the MDS 2.0. TABLE 1 (below) provides a description of which assessments are used to calculate each of the distinct QI reports. MDS assessments that have **Section A8b.(Codes for assessments required for Medicare PPS or the State)** are included in the QI reports only if Section A8a. is coded as described in TABLE 1.

TABLE 1
Assessments Used for QI Reports

MDS 2.0 Section A8a. - Primary reasons for assessment	QI Reports		
	Facility Characteristics	Facility Quality Indicator Profile	Resident Level Summary
1. Admission Assessment	X	Excluded	X
2. Annual Assessment	X	X	X
3. Significant change in status assessment	X	X	X
4. Significant correction of prior assessment	X	X	X
5. Quarterly review assessment	X	X	X
6. Discharged - return not anticipated	Excluded	Excluded	Excluded
7. Discharge - return anticipated	Excluded	Excluded	Excluded
8. Discharged prior to completing initial assessment	Excluded	Excluded	Excluded
9. Reentry	Excluded	Excluded	Excluded
10. Significant correction of prior quarterly assessment	X	X	X
0. NONE OF ABOVE	Excluded	Excluded	Excluded

The Facility Characteristics Report

This report (See Appendix B) can be used to help identify possible areas for further emphasis or review as part of a survey or a facility's quality assurance/improvement process. This report contains demographic information by percentages both for the facility and for the state. Remember that while facility percentages can be very informative, the best information is often gained when statewide percentages are used for comparisons.

Facilities may have any of the following that may indicate a need to concentrate a review on certain resident groups:

- A very old population or an unusually high number of male residents.
- A higher than average percentage of Medicare as a payment source, which may indicate an emphasis on rehabilitation or a more acutely ill population.
- A higher than average percentage of psychiatric and mentally retarded residents or those receiving hospice care.
- Higher than average percentages of admission assessments or significant change assessments.

The Facility Quality Indicator Profile Report

This report (See Appendix B) shows each QI, the facility percentage and how the facility compares with other facilities in the state. The comparisons with the state are shown using both percentages and a ranking system. This report helps you to identify possible areas for further emphasis in facility quality improvement activities or investigation during the survey process. Because the goal is to highlight potential quality of care problems for the facility, this report includes only residents for whom the most recent assessment is likely to reflect care in the facility. It does not include information for residents who are new admissions, since the MDS information for them is likely to reflect the care they received while outside of the facility.

The information on the Facility Quality Indicator Profile report is presented in several columns:

The first column is "Number in the Numerator." This is the actual number of residents who flagged on the QI. These are the people who "have" the QI. For the purposes of calculating the percentage(s), it is the numerator.

The second column is "Number in the Denominator." This is the number of people in the facility who "could have" the QI. For the purposes of calculating percentage(s), it is the denominator. So, out of the number of people who "could have" or could flag on the QI, the first column is the number who actually did. Most of the time, the number of residents who could have the QI will be the total facility population, excluding those whose most recent assessment is for an admission; but there are some QIs that use a specific sub-group as those who "could have" the QI. A good example of this sub-group is the QI 19 "Antipsychotic Use in the Absence of Psychotic and Related Conditions". The only residents who "could have" this QI are those without a psychotic disorder or other related conditions. In the case of incidence QIs, the group of residents who could have the QI includes only people who did not have the QI condition in the previous period. This is

because incidence QIs measure the development of the QI where it did not exist previously. An example of an incidence QI with a specific sub-group is QI 7 "Incidence of Cognitive Impairment". The denominator ("could have it") for this QI is only those residents who, on their previous assessment, were not cognitively impaired and on their current assessment are cognitively impaired.

The third column is the “Facility Percentage.” This column tells you what percentage of residents who could have the QI actually did have it. If 60 people could flag on a QI (denominator, column 2) and 30 people actually did have it (numerator, column 1), the facility proportion (percentage, ratio) would be 50%.

The fourth column is the “Comparison Group Percentage.” This column tells you what the statewide percentage is for the QI so that you may make comparisons with the facility. This column can be very helpful in pointing toward those facilities that may be way above or below the statewide percentage or proportion. These facilities are called "outliers," meaning their percentages are out of line with respect to the rest of the state.

The fifth column is the “Percentile Rank.” This column ranks facilities relative to other facilities in the state on each QI. The higher the ranking, the more likely the QI needs to be reviewed as part of the facility quality improvement process or emphasized on the survey.

The sixth column identifies those QIs that have crossed an investigative threshold. This column identifies those QIs where the facility ranking is high enough that it should be investigated or emphasized on the survey or in any internal quality improvement initiative. It means that this facility's performance on this particular QI is higher than some critical value, and there is a possible concern for the quality of care. It is an area to highlight for investigation or emphasis during off-site survey preparation or to choose for review in the facility QA/QI process. QIs in this column at or above the 90th percentile will be designated with a flag (🚩). All Sentinel Health Event Quality Indicators (i.e., Prevalence of Dehydration, Prevalence of Fecal Impaction, and Prevalence of Stage 1 –4 Pressure Ulcers-Low Risk) with one or more occurrences will also be designated with a flag (🚩).

Remember that just because a QI has flagged (exceeded a threshold) does not mean that there is an automatic assumption of a problem. It means that the information suggests that there is a concern that should be reviewed to see whether a problem exists and how it is being addressed. Remember also that just because a facility does not flag does not mean that there is no problem with the quality of care in that area. You need to consider all of the information provided, and use your best clinical judgment. The QI information is only a tool for surveyors and facility staff to use. It is not to be used exclusively for quality assurance/improvement activities or to make assumptions about care.

This report is used by the facility to identify areas of potential concern for the QA/QI review using the following steps:

- **Step 1** - Choose all Quality Indicators for which the facility is ranked on or above the 90th percentile, or any percentile level the facility may wish to choose, as concerns for the review. Determine whether any of the quality indicators above the selected percentile threshold are clinically linked to each other. It may be reasonable to review these Quality Indicators as a group (see TABLE 2, Clinically Linked QIs, below).
- **Step 2** - Choose all Sentinel Health Event Quality Indicators (i.e., Prevalence of Dehydration, Prevalence of Fecal Impaction or Prevalence of Stage 1-4 Pressure Ulcers - Low Risk) where even one occurrence is sufficient to warrant review.
- **Step 3** - Look at the actual percentages of the facility compared to the peer group. Are there any ratios that are of particular concern even though the facility does not rank very high? For example, 50% of the residents are involved in little or no activities.
- **Step 4** - Identify the actual number of residents that flag (have the condition represented by the Quality Indicator). This will help in determining the prevalence of the condition in the facility and may also help approximate the number of residents with the Quality Indicator that should be considered for inclusion in a review sample.

TABLE 2
Clinical Links Among MDS-Based Quality Indicator Domains
and Quality Indicators

<u>Accidents</u> New Fracture Falls Use of 9+ Medications Weight Loss Dehydration Decline in Late Loss ADLs Psychotropic Drug Use (any) Daily Physical Restraints	<u>Behavior/Emotional Patterns</u> Use of 9+ Medications Incidence of Cognitive Impairment Fecal Impaction Urinary Tract Infection Weight Loss Dehydration Bedfast Residents Psychotropic Drug Use (any) Daily Physical Restraints Little or No Activities	<u>Clinical Management--</u> <u>Use of 9+ Medications</u> Falls Symptoms of Depression Incidence of Cognitive Impairment Bowel/Bladder Incontinence Fecal Impaction Weight Loss Dehydration Decline in Late Loss ADLs Psychotropic Drug Use (any)
<u>Cognitive Patterns--</u> <u>Incidence of Cognitive</u> <u>Impairment</u> Behavior Affecting Others Symptoms of Depression Fecal Impaction Urinary Tract Infections Weight Loss Dehydration Decline in Late Loss ADLs Psychotic Drug Use (any) Daily Physical Restraints Little or No Activities	<u>Elimination/Incontinence</u> Use of 9+ Medications Urinary Tract Infections Dehydration Bedfast Residents Decline in Late Loss ADLS Psychotropic Drug Use (any) Daily Physical Restraints Pressure Sores	<u>Infection Control--</u> <u>Urinary Tract Infections</u> Behavior Affecting Others Use of 9+ Medications Incidence of Cognitive Impairment Bowel/Bladder Incontinence Indwelling Catheter Dehydration Bedfast Residents Pressure Sores
<u>Nutrition/Eating</u> Symptoms of Depression Use of 9+ Medications Incidence of Cognitive Impairment Fecal Impaction Urinary Tract Infections Bedfast Residents Decline in Late Loss ADLs Psychotropic Drug Use Daily Physical Restraints Pressure Sores	<u>Physical Functioning</u> New Fracture Falls Symptoms of Depression Use of 9+ Medications Incidence of Cognitive Impairment Bladder/Bowel Incontinence Urinary Tract Infections Weight Loss Dehydration Psychotropic Drug Use Daily Physical Restraints Little or No Activities Pressure Sores	<u>Psychotropic Drug Use</u> Falls Behavior Affecting Others Symptoms of Depression Use of 9+ Medications Incidence of Cognitive Impairment Bladder/Bowel Incontinence Weight Loss Decline in Late Loss ADLs Daily Physical Restraints Little or No Activities
<u>Quality of Life</u> Falls (Physical Restraints) Behavior Affecting Others Symptoms of Depression Weight Loss (Restraints) Dehydration (Restraints) Bedfast Decline In Late Loss ADLs Decline in ROM (Restraints) Psychotropic Drug Use Pressure Sores Restraints		<u>Skin Care</u> New fractures Bladder/Bowel Incontinence Indwelling Catheters Weight Loss Dehydration Bedfast Residents Daily Physical Restraints

The Resident Level Quality Indicator Summary Report

This report (See Appendix B) lists each resident from left to right, by name, assessment date and reason for assessment. Assessment reasons reflect what was coded and transmitted in the AA8a and AA8b MDS fields. These codes range from 0 through 10 and include:

AA8a Code	Description	AA8b code	Description
1	Admission	blank	No Medicare Assessment Reason
2	Annual	1	Medicare 5 day
3	Significant Change	2	Medicare 30 day
4	Significant Correction (full)	3	Medicare 60 day
5	Quarterly	4	Medicare 90 day
6	Discharged – return not anticipated	5	Medicare readmit/return
7	Discharged – return anticipated	6	Other state required assessment
8	Discharged – prior to completion	7	Medicare 14 day
9	Reentry	8	Other Medicare required assessment
10	Significant Correction (quarterly)		
0	None of the Above		

Following the resident name and assessment information are separate columns for each Quality Indicator, including high and low risk. A checkmark [✓] appears in the Quality Indicator column when the resident "flags" on that Quality Indicator. At the far right end of the Resident Level Summary is a column that indicates if the resident was discharged after the assessment date used for the QI report. This is followed by a count of the total number of Quality Indicators that flagged for the resident. Please note that the discharged column contains a checkmark [✓] only if the resident was discharged after the assessment reference date and before the end date for the report period.

Example-- John Doe has a checkmark [✓] in the Quality Indicator columns for Prevalence of Falls, Use of 9+ Medications, Prevalence of Fecal Impaction, and Prevalence of Little or No Activities. This means that John Doe had these conditions or situations occur during the assessment period identified on the report and he "flagged" on a total of 4 Quality Indicators. The report may also be read vertically to quickly identify all residents with a specific Quality Indicator.

The Resident Level Summary report can assist in choosing concerns for facility review, but to a lesser degree than the Facility Profile Report. The Resident Level Summary Report can establish patterns between Quality Indicators. Consideration should be given to choosing Quality Indicators as concerns for facility review that show strong patterns and to selecting residents who have similar patterns.

The Resident Listing Report

This report contains a list sorted by name of all residents appearing in any of the QI reports including residents whose most recent assessment is an Admission assessment. The primary purpose of this report is to provide more identifying information about residents and the assessments used in the preparation of the QI reports. The **first column**, Resident ID, represents a code that is only used in the states MDS database system. This column is not meant to reflect any ID code used by facilities or surveyors. It is included only for reference purposes. **Column 2** presents the Residents last name and first name as represented in the Standard Automation system. In **columns three and four** are the most recent assessment reference date and the associated reason for assessment (AA8a). The **fifth and sixth columns** represent the assessment date and reason for the previous assessment (that is, the assessment used as the basis for QI incidence calculations that require the most recent previous assessment). **Column seven**, Discharge date, shows the resident's most recent discharge that occurs on or after the most recent assessment date. Note that discharges occurring before the most recent assessment date are not shown. The final columns reflect residents room number, birth date, SSN and Medicare number.

Data Submission Summary Report

This report was not designed as a Quality Indicator report. Rather, it is included to provide some aggregate information about the MDS **data submissions** that occurred during a period of time. This report summarizes the number of submissions based on the **date assessments were submitted** to the state MDS system. The intent of this report is to indicate the number of production submissions by month and by type of assessment submitted. The **first column** of the report indicates the month and year. The **second column** shows the number of production (non-test) submissions during the month. The **third column**, Unique Residents, is a count of the residents appearing in the submissions for the month. **Total assessments** is the count of assessments accepted by the state system during the month. The **final column**, Accepted Assessments by Type, shows the count of assessments by the type of assessment submitted using the MDS field AA8a.

Assessment Summary Report

This report was also not designed as a Quality Indicator report. It is included to provide some aggregate information about the MDS data assessments that occurred during a period of time based on the **assessment reference date** (MDS field A3a). The intent of this report is to summarize MDS assessments based on the MDS Assessment Reference Date and display this by month and by type of assessment submitted. This report can be used to develop a rough understanding of the MDS data flow for a facility. The **first column** of the report indicates the month and year. The **second column**, Unique Residents, is a count of the residents with MDS assessments occurring during the month. **Total assessments** is the count of assessments accepted by the state system with assessment dates falling in the month. The **final column**, Accepted Assessments by Type, shows the count of assessments by the type of assessment using the MDS field AA8a.

Steps in the Facility QI Review Process

Step 1 Review the QI reports and select a group of quality indicators to review.

Consider:

- the percentile rank and peer group/facility percentages;
- clinically linked quality indicators; and
- previous regulatory survey results (i.e., deficiencies).

Step 2 Select a separate sample of residents for each QI that will be reviewed for potential problems. *Some residents may be in more than one sample.*

Choose:

- residents from every unit;
- residents with many and few flagged QIs;
- residents with a similar pattern of flagged QIs;
- the number of residents necessary to establish whether or not a problem exists;
 - *Select at least 5 residents, if possible, to determine if there is a pattern of inaccuracy.
 - *Select more residents for QIs that commonly have a higher prevalence such as incontinence or little or no activities.

Step 3 Review the care for each sampled resident related to the QI being reviewed. (See the protocol below titled, “Resident Level Review.”)

Step 4 Make conclusions about the quality of care for each resident for each QI being reviewed.

Step 5 Decide if there is a facility-wide problem with the QI after reviewing the care for each resident in the sample. (See the section below titled, “Facility Level Review.”)

Step 6 Discuss the conclusions of the QI investigation with the Quality Assurance Committee and plan improvement initiatives. (See the section below titled, “Recommendations and Follow-up.”)

Step 7 Evaluate the effectiveness of the improvement plan based on subsequent QI reports after determining if the resident population is the same.

Facilities may use any protocol for reviewing areas of concern identified on the QI reports. An example protocol is provided below.

Resident Level Review
(Apply the following protocol to each resident in the sample.)

Assessment - Accuracy and Decision-Making

Does the Minimum Data Set accurately reflect the status of the resident during the assessment period?

- For each resident in the sample, the MDS should contain all of the items necessary to match the QI definition (See the QI definition Matrix Appendix A).
- The resident's condition can be verified by evidence other than the MDS.

Is the assessment information accurate? If inaccurate, is the inaccuracy of a nature or a degree that it affects the quality of care for THIS sampled resident?

Decide if the interdisciplinary team has used the assessment information to make sound decisions about the care that the resident needs related to the QI being reviewed.

Is there a problem with the synthesis of assessment information and the care plan decision for this resident related to the QI?

Care Planning

Has the condition represented by the quality indicator been addressed in the resident's plan of care if the interdisciplinary team has concluded from the assessment information that interventions are necessary? (Note: This is dependent on the quality of the decision-making process.)

Is there a problem with the development of a plan of care for this resident related to the QI?

Implementation

Is staff knowledgeable about the plan of care and providing the care and services described in the care plan?

Is there a problem with the provision of care related to this QI as described in the plan of care for this resident?

Evaluation and Monitoring

Has staff responded to changes in this resident's condition related to the QI? Have the effects of the care plan goals, interventions, and implementation been reviewed and modified as necessary to promote the best outcome for the resident based on an accurate and current assessment?

Is there a problem with the monitoring and evaluation of the outcomes of the care and services provided for this resident related to the QI?

Conclusions

Was the resident's condition (related to the QI) correctly assessed, reasonable interventions planned, the plan implemented, and the effectiveness evaluated?

As a result of your investigation of this QI and this sampled resident, were problems with care identified?

Was the quality problem described for this sampled resident and related to this QI of sufficient magnitude to conclude that there was a quality of care problem for the facility?

As a result of the investigation of this QI and this resident, did you identify other quality problems for either this or other residents? Were there problems related to other QIs that were potentially problematic?

Facility Level Review

Was there a pattern of inaccuracy with this quality indicator?

Considering the entire sample or the severity of one or more cases, do you believe that there is a problem across the facility with the issue identified by this QI?

Can the problem related to this QI be isolated to a specific area of the care process?

Recommendations and Follow-up

▪ **Can the improvement plan be targeted to one primary cause of the care problem?**

Improvement plans may focus on:

- ☐ Changes in policy and procedures.
- ☐ Training with a certain piece of equipment or with a particular procedure.
- ☐ Re-training staff having difficulty.

▪ **Did the problems with care stem from a variety of unrelated causes?**

Improvement plans may focus on:

- ☐ Supervision.

▪ **Were problems with care related to general problems with one or more areas of the care process?**

Improvement plans may focus on:

- ☐ Education for all staff on the Resident Assessment Instrument or in specific areas of the care process.

▪ **Is there a need for referrals or further review before final decisions about the development of improvement plans can be made?**

For example:

- ☐ The consulting pharmacist and medical director need to review the problem more extensively before a plan of improvement can be developed.
- ☐ The new dietitian may look at the patterns of weight loss that were found during the investigation before an improvement plan can be developed.

- **Were problems found other than with the QI under review? Are they urgent problems that need immediate attention?**
- **Were there issues of regulatory non-compliance found during the review that need to be corrected?**

Use of QI Reports in the Survey Process

The original purpose in developing MDS-based QIs was for surveyor use in the survey process. With the national implementation of the analytic reporting system, surveyors will have access to QI and other reports for the facilities within their state. These reports (See Appendix B) will include:

Facility Characteristics and **Facility Quality Indicator Profiles** used to target specific potential facility problem areas that need investigation during the survey to determine if actual problems exist. Surveyors will concentrate on potential problem areas likely identified by facility percentile rankings.

Resident Level Summary used to select appropriate residents for resident samples to address areas of potential concern for investigation. Surveyors will initially choose their Phase 1 survey sample directly from this report during their Offsite Survey Task. Surveyors will have the ability to replace residents in this pre-selected sample based on initial onsite findings especially from the facility tour.

APPENDIX A

QUALITY INDICATOR MATRIX

DOMAIN: ACCIDENTS

TITLE	DESCRIPTION	MDS 2.0 QUARTERLY VARIABLE DEFINITION	RISK ADJUSTMENT
1. Incidence of new fractures ¹ 1.1A0001	<p>Numerator: Residents with new fractures on most recent assessment.</p> <p>Denominator: Residents who did not have fractures on the previous assessment.</p>	<p>MOST RECENT ASSESSMENT: <u>new</u> hip fracture (J4c is checked on most recent assessment and J4c is not checked on previous assessment)</p> <p style="text-align: center;">OR</p> <p>other <u>new</u> fractures (J4d is checked on most recent assessment and J4d is not checked on previous assessment)</p>	No adjustment.
2. Prevalence of falls. 1.2A0004	<p>Numerator: Residents who had falls on most recent assessment.</p> <p>Denominator: All residents on most recent assessment.</p>	<p>MOST RECENT ASSESSMENT: Fall within past 30 days (J4a is checked).</p>	No adjustment.

¹ QI was modified (from the original MDS+ definition) because certain information was not available on the MDS 2.0 Quarterly. In some cases this has resulted in a change to the title of the QI.

QUALITY INDICATORS FOR IMPLEMENTATION

QI Version #: **6.3**

Revised: 1/19/99

MDS 2.0 Form Type: QUARTERLY ASSESSMENT FORM-TWO PAGE

DOMAIN: BEHAVIORAL/EMOTIONAL PATTERNS

TITLE	DESCRIPTION	MDS 2.0 QUARTERLY VARIABLE DEFINITION	RISK ADJUSTMENT
3. Prevalence of behavioral symptoms affecting others.	<p>Numerator:</p> <p>Residents with behavioral symptoms affecting others on most recent assessment.</p> <p>Denominator:</p> <p>All residents on most recent assessment.</p>	<p>MOST RECENT ASSESSMENT:</p> <p>Behavioral symptoms affecting others:</p> <p>Verbally abusive (E4b-Box A >0); OR physically abusive (E4c-Box A > 0); OR socially inappropriate /disruptive behavior (E4d-Box A > 0).</p>	<p><u>High Risk</u>¹:</p> <p>[Presence of Cognitive Impairment (see Glossary)] ON THE MOST RECENT ASSESSMENT.</p> <p>OR</p> <p>[Psychotic disorders (I3= ICD 9 CM 295.00-295.9; 297.00 -298.9 or I1gg schizophrenia is checked)] OR [Manic-depressive (I3=ICD 9 CM 296.00-296.9 or I1ff is checked)]² at the MOST RECENT OR ON THE MOST RECENT FULL ASSESSMENT.</p> <p><u>Low Risk</u>: All others at MOST RECENT ASSESSMENT.</p> <p>Note: When the most recent assessment is a Quarterly Assessment, we will “carry forward “ information about psychotic disorders and manic depression from the most recent FULL assessment.</p>
2.1A0005			

¹ Risk adjustment was modified (from the original MDS+ definition) because certain information was not available on the MDS 2.0 Quarterly.

² Instructions relative to the completion of item I3 (ICD-9 codes) are ambiguous. Pending clarification from HCFA, we recommend that this item include all diagnoses, from the last 90 days that are related to current ADL status, cognitive status, mood and behavior status, medical treatments, nursing monitoring, or risk of death.

¹ QI was modified (from the original MDS+ definition) because certain information was not available on the MDS 2.0 Quarterly. In some cases this has resulted in a change to the title of the QI.

QUALITY INDICATORS FOR IMPLEMENTATION*QI Version #:* **6.3***Revised:* 1/19/99*MDS 2.0 Form Type:* **QUARTERLY ASSESSMENT FORM-TWO PAGE****DOMAIN: BEHAVIORAL/EMOTIONAL PATTERNS**

TITLE	DESCRIPTION	MDS 2.0 QUARTERLY VARIABLE DEFINITION	RISK ADJUSTMENT
5. Prevalence of symptoms of depression without antidepressant therapy. ¹ 2.3A0011	Numerator: Residents with symptoms of depression on most recent assessment <u>and</u> no antidepressant therapy. Denominator: All residents on most recent assessment.	Depression: See Glossary AND No antidepressant (O4c=0)	No adjustment.

¹ QI was modified (from the original MDS+ definition) because certain information was not available on the MDS 2.0 Quarterly. In some cases this has resulted in a change to the title of the QI.

QI Version #: **6.3**

MDS 2.0 Form Type: **QUARTERLY ASSESSMENT FORM-TWO PAGE**[illegible]

¹ QI was modified (from the original MDS+ definition) to reflect lack of detailed drug data from Section U.

QI Version #: **6.3**

MDS 2.0 Form Type: QUARTERLY ASSESSMENT FORM-TWO PAGE

TITLE	DESCRIPTION	MDS 2.0 QUARTERLY VARIABLE DEFINITION	RISK ADJUSTMENT
7. Incidence of cognitive impairment. ¹	<p>Numerator:</p> <p>Residents who were newly cognitively impaired on most recent assessment.</p> <p>Denominator:</p> <p>Residents who were not cognitively impaired on previous assessment.</p>	<p>MOST RECENT ASSESSMENT:</p> <p>Cognitively Impaired.</p> <p>PREVIOUS ASSESSMENT:</p> <p>Does not have Cognitive Impairment.</p> <p>For definition of Cognitive Impairment see Glossary.</p>	No adjustment.
4.1A0016			

¹ QI was modified (from the original MDS+ definition) because certain information was not available on the MDS 2.0 Quarterly. In some cases this has resulted in a change to the title of the QI.

QUALITY INDICATORS FOR IMPLEMENTATIONQI Version #: **6.3**

Revised: 1/19/99

MDS 2.0 Form Type: **QUARTERLY ASSESSMENT FORM-TWO PAGE****DOMAIN: ELIMINATION/INCONTINENCE**

TITLE	DESCRIPTION	MDS 2.0 QUARTERLY VARIABLE DEFINITION	RISK ADJUSTMENT
8. Prevalence of Bladder or Bowel Incontinence. 5.1A0018	<p>Numerator: Residents who were frequently incontinent or incontinent on most recent assessment.</p> <p>Denominator: All residents, except as noted in exclusion.</p>	<p>MOST RECENT ASSESSMENT:</p> <p>Bladder Incontinence (H1b=3 or 4); OR Bowel incontinence (H1a=3 or 4).</p> <p>EXCLUDE:</p> <p>Residents who are Comatose (B1=1); OR have indwelling catheter (H3d is checked); OR have an ostomy (H3i is checked) at MOST RECENT ASSESSMENT.</p>	<p><u>High Risk</u>¹: Severe cognitive impairment (see Glossary); OR Totally ADL dependent in mobility ADL's (G1 a, b, e-Box A self-performance = 4 in all areas) at MOST RECENT ASSESSMENT.</p> <p><u>Low Risk</u>: All others at MOST RECENT ASSESSMENT.</p>

¹ Risk adjustment was modified (from the original MDS+ definition) because certain information was not available on the MDS 2.0 Quarterly.

QUALITY INDICATORS FOR IMPLEMENTATION*QI Version #:* **6.3***Revised:* 1/19/99*MDS 2.0 Form Type:* **QUARTERLY ASSESSMENT FORM-TWO PAGE****DOMAIN: ELIMINATION/INCONTINENCE**

TITLE	DESCRIPTION	MDS 2.0 QUARTERLY VARIABLE DEFINITION	RISK ADJUSTMENT
9. Prevalence of occasional or frequent Bladder or Bowel Incontinence without a Toileting Plan. 5.2A0020	Numerator: Residents without toileting plan on most recent assessment. Denominator: Residents with frequent incontinence or occasionally incontinent in either bladder or bowel on most recent assessment.	MOST RECENT ASSESSMENT: No scheduled toileting plan and no bladder retraining program (Neither H3a nor H3b is checked). Occasional or frequent bladder incontinence (H1b = 2 or 3) OR Bowel incontinence (H1a = 2 or 3).	No adjustment.
10. Prevalence of Indwelling Catheters. 5.3A0021	Numerator: Indwelling catheter on most recent assessment. Denominator: All residents on most recent assessment.	MOST RECENT ASSESSMENT: Indwelling catheter (H3d is checked).	No adjustment ¹

¹ Risk adjustment (included in the original MDS+ definition) cannot be defined because certain information was not available on the MDS 2.0 Quarterly.

QI Version #: **6.3**

MDS 2.0 Form Type: **QUARTERLY ASSESSMENT FORM-TWO PAGE**[illegible]

QI Version #: **6.3**

MDS 2.0 Form Type: QUARTERLY ASSESSMENT FORM-TWO PAGE[illegible]

QI Version #: **6.3**

DOMAIN: NUTRITION/EATING

TITLE	DESCRIPTION	MDS 2.0 QUARTERLY VARIABLE DEFINITION	RISK ADJUSTMENT
13. Prevalence of weight loss. 7.1A0026	<p>Numerator:</p> <p>Proportion of residents with weight loss of 5% or more in the last 30 days or 10% or more in the last 6 months on most recent assessment.</p> <p>Denominator:</p> <p>All residents on most recent assessment.</p>	<p>MOST RECENT ASSESSMENT:</p> <p>Weight loss (K3a=1).</p>	No adjustment.

QUALITY INDICATORS FOR IMPLEMENTATION*QI Version #:* **6.3***Revised:* 1/19/99*MDS 2.0 Form Type:* **QUARTERLY ASSESSMENT FORM-TWO PAGE****DOMAIN: NUTRITION/EATING**

TITLE	DESCRIPTION	MDS 2.0 QUARTERLY VARIABLE DEFINITION	RISK ADJUSTMENT
14. Prevalence of tube feeding. 7.2A0027	Numerator: Residents with tube feeding on most recent assessment. Denominator: All residents on most recent assessment.	MOST RECENT ASSESSMENT: Feeding tube (K5b is checked).	No adjustment.
15. Prevalence of dehydration. 7.3A0028	Numerator: Residents with dehydration. Denominator: All residents on most recent assessment.	Dehydration - output exceeds input (J1c is checked or I3 =ICD 9 CM 276.5) ¹	No adjustment.

¹ Instructions relative to the completion of item I3 (ICD-9 codes) are ambiguous. Pending clarification from HCFA, we recommend that this item include all diagnoses, from the last 90 days that are related to current ADL status, cognitive status, mood and behavior status, medical treatments, nursing monitoring, or risk of death.

QUALITY INDICATORS FOR IMPLEMENTATION*QI Version #:* **6.3***Revised:* 1/19/99*MDS 2.0 Form Type:* **QUARTERLY ASSESSMENT FORM-TWO PAGE****DOMAIN: PHYSICAL FUNCTIONING**

TITLE	DESCRIPTION	MDS 2.0 QUARTERLY VARIABLE DEFINITION	RISK ADJUSTMENT
16. Prevalence of bedfast residents. 8.1A0030	Numerator: Residents who are bedfast on most recent assessment. Denominator: All residents on most recent assessment.	MOST RECENT ASSESSMENT: Bedfast (G6a is checked).	No adjustment.

QUALITY INDICATORS FOR IMPLEMENTATIONQI Version #: **6.3**

Revised: 1/19/99

MDS 2.0 Form Type: **QUARTERLY ASSESSMENT FORM-TWO PAGE****DOMAIN: PHYSICAL FUNCTIONING**

TITLE	DESCRIPTION	MDS 2.0 QUARTERLY VARIABLE DEFINITION	RISK ADJUSTMENT																						
17. Incidence of decline in late loss ADLs.	<p>Numerator:</p> <p>Residents showing ADL decline in self-performance between previous and most recent assessment.</p> <p>a. One level decline in two or more late loss ADL's</p> <p>OR</p> <p>b. Two level decline in one or more late loss ADL's.</p> <p>Denominator:</p> <p>All residents who have most recent and previous assessments (Excluding those who cannot decline because they are already totally dependent or who are comatose on the previous assessment).</p>	<p>At least ONE level decline in TWO or more of the following: bed mobility, transfer, eating, toileting. G1 a, b, h, i coding pattern Box A:</p> <table><tr><td><u>Previous</u></td><td><u>Most Recent</u></td></tr><tr><td><u>Assessment</u></td><td><u>Assessment</u></td></tr><tr><td>0</td><td>1,2,3,or 4</td></tr><tr><td>1</td><td>2,3, or 4</td></tr><tr><td>2</td><td>3 or 4</td></tr><tr><td>3</td><td>4</td></tr></table> <p>OR</p> <p>At least a TWO level decline in ONE or more of the following: bed mobility, transfer, eating, toileting. G1 a, b, h, i coding pattern Box A:</p> <table><tr><td><u>Previous</u></td><td><u>Most Recent</u></td></tr><tr><td><u>Assessment</u></td><td><u>Assessment</u></td></tr><tr><td>0</td><td>2,3,4</td></tr><tr><td>1</td><td>3,4</td></tr><tr><td>2</td><td>4</td></tr></table> <p>Note: A value of 8 is equal to missing for purposes of defining the change in ADL.</p> <p>EXCLUDE: Residents who are totally dependent on ADL. (G1a-j Box A -all items =4 or 8) OR comatose (B1=1) on PREVIOUS ASSESSMENT.</p>	<u>Previous</u>	<u>Most Recent</u>	<u>Assessment</u>	<u>Assessment</u>	0	1,2,3,or 4	1	2,3, or 4	2	3 or 4	3	4	<u>Previous</u>	<u>Most Recent</u>	<u>Assessment</u>	<u>Assessment</u>	0	2,3,4	1	3,4	2	4	No adjustments ¹ .
<u>Previous</u>	<u>Most Recent</u>																								
<u>Assessment</u>	<u>Assessment</u>																								
0	1,2,3,or 4																								
1	2,3, or 4																								
2	3 or 4																								
3	4																								
<u>Previous</u>	<u>Most Recent</u>																								
<u>Assessment</u>	<u>Assessment</u>																								
0	2,3,4																								
1	3,4																								
2	4																								
8.2A0031																									

¹ Risk adjustment (included in the original MDS+ definition) cannot be defined because certain information was not available on the MDS 2.0 Quarterly.

DOMAIN: PHYSICAL FUNCTIONING

TITLE	DESCRIPTION	MDS 2.0 QUARTERLY VARIABLE DEFINITION	RISK ADJUSTMENT										
18. Incidence of decline in ROM. ¹	<p>Numerator:</p> <p>Residents with increases in functional limitation in ROM between previous and most recent assessments.</p> <p>Denominator:</p> <p>All residents with previous and most recent assessments, with the exclusion noted.</p>	<p>Functional limitation in ROM (G4a-f-Box A>0) in Most Recent Assessment is greater than the functional limitation in ROM on the Previous Assessment.</p> <table><tr><td><u>Most Recent</u></td><td><u>Previous</u></td></tr><tr><td><u>Assessment</u></td><td><u>Assessment</u></td></tr><tr><td>[SUM G4a-f]</td><td>> [SUM G4a-f]</td></tr><tr><td>↑</td><td>↑</td></tr><tr><td>Box A</td><td>Box A</td></tr></table> <p>Exclude: residents with maximal loss of ROM at previous assessment (Sum G4a-f, Box A, is 12 on previous assessment).</p>	<u>Most Recent</u>	<u>Previous</u>	<u>Assessment</u>	<u>Assessment</u>	[SUM G4a-f]	> [SUM G4a-f]	↑	↑	Box A	Box A	No adjustment ² .
<u>Most Recent</u>	<u>Previous</u>												
<u>Assessment</u>	<u>Assessment</u>												
[SUM G4a-f]	> [SUM G4a-f]												
↑	↑												
Box A	Box A												
8.3A0034													

² Risk adjustment (included in the original MDS+ definition) cannot be defined because certain information was not available on the MDS 2.0 Quarterly.

QUALITY INDICATORS FOR IMPLEMENTATION

QI Version #: **6.3**

Revised: 1/19/99

MDS 2.0 Form Type: QUARTERLY ASSESSMENT FORM-TWO PAGE

DOMAIN: PSYCHOTROPIC DRUG USE

TITLE	DESCRIPTION	MDS 2.0 QUARTERLY VARIABLE DEFINITION	RISK ADJUSTMENT
19. Prevalence of antipsychotic use, in the absence of psychotic and related conditions.	<p>Numerator:</p> <p>Residents receiving anti-psychotics on most recent assessment</p> <p>Denominator:</p> <p>All residents on most recent assessment, except those with psychotic or related conditions (see exclusion).</p>	<p>MOST RECENT ASSESSMENT:</p> <p>Antipsychotics (O4a\geq 1).</p> <p>EXCLUDE¹ :</p> <p>Residents with one or more psychotic disorders (I3=295.00-295.9; 297.00 -298.9 or I1gg schizophrenia is checked); OR Tourette's (I3=307.23); OR Huntington's (I3=333.4) ² ON THE MOST RECENT OR ON THE MOST RECENT FULL ASSESSMENT; OR with hallucinations (J1i is checked) ON THE MOST RECENT ASSESSMENT.</p> <p>Note: When the most recent assessment is a Quarterly Assessment, we will carry forward information about psychotic disorders, Tourette's, and Huntington's from the most recent full assessment.</p>	<p>High Risk³:</p> <p>Cognitive Impairment AND Behavior Problems at MOST RECENT ASSESSMENT. (see Glossary for definitions).</p> <p><u>Low Risk:</u></p> <p>All others at MOST RECENT ASSESSMENT.</p>
9.1A0037			

¹ Exclusion was modified (from the original MDS+ definition) because certain information was not available on the MDS 2.0 Quarterly.

² Instructions relative to the completion of item I3 (ICD-9 codes) are ambiguous. Pending clarification from HCFA, we recommend that this item include all diagnoses, from the last 90 days that are related to current ADL status, cognitive status, mood and behavior status, medical treatments, nursing monitoring, or risk of death.

³ Risk adjustment was modified (from the original MDS+ definition) because certain information was not available on the MDS 2.0 Quarterly.

QUALITY INDICATORS FOR IMPLEMENTATION

QI Version #: **6.3**

Revised: 1/19/99

MDS 2.0 Form Type: QUARTERLY ASSESSMENT FORM-TWO PAGE

DOMAIN: PSYCHOTROPIC DRUG USE

TITLE	DESCRIPTION	MDS 2.0 QUARTERLY VARIABLE DEFINITION	RISK ADJUSTMENT
20. Prevalence of antianxiety /hypnotic use.	<p>Numerator:</p> <p>Residents who received antianxiety or hypnotics on most recent assessment.</p> <p>Denominator:</p> <p>All residents on most recent assessment, except those with psychotic or related conditions (see exclusion).</p>	<p>MOST RECENT ASSESSMENT: Antianxiety/hypnotic (O4b or O4d \geq 1).</p> <p>EXCLUDE¹ :</p> <p>Residents with one or more psychotic disorders (I3=295.00-295.9; 297.00 -298.9); or I1gg schizophrenia is checked) OR Tourette's (I3=307.23); OR Huntington's (I3=333.4)² ON THE MOST RECENT OR ON THE MOST RECENT FULL ASSESSMENT; OR with hallucinations (J1i is checked) ON THE MOST RECENT ASSESSMENT.</p> <p>Note: When the most recent assessment is a Quarterly Assessment, we will carry forward information about psychotic disorders, Tourette's, and Huntington's from the most recent full assessment.</p>	No adjustment.
9.3A0043			

¹ Exclusion was modified (from the original MDS+ definition) because certain information was not available on the MDS 2.0 Quarterly.

² Instructions relative to the completion of item I3 (ICD-9 codes) are ambiguous. Pending clarification from HCFA, we recommend that this item include all diagnoses, from the last 90 days that are related to current ADL status, cognitive status, mood and behavior status, medical treatments, nursing monitoring, or risk of death.

QI Version #: **6.3**

DOMAIN: PSYCHOTROPIC DRUG USE

TITLE	DESCRIPTION	MDS 2.0 QUARTERLY VARIABLE DEFINITION	RISK ADJUSTMENT
<p>21. Prevalence of hypnotic use more than two times in last week.¹</p> <p>9.4A0047</p>	<p>Numerator:</p> <p>Residents who received hypnotics more than 2 times in last week on most recent assessment.</p> <p>Denominator:</p> <p>All residents on most recent assessment.</p>	<p>MOST RECENT ASSESSMENT:</p> <p>Hypnotic drug use more than 2 of the last 7 days (O4d > 2)</p>	<p>No adjustment.</p>

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QUALITY INDICATORS FOR IMPLEMENTATION*QI Version #:* **6.3***Revised:* 1/19/99*MDS 2.0 Form Type:* **QUARTERLY ASSESSMENT FORM-TWO PAGE****DOMAIN: QUALITY OF LIFE**

Additional quality of life dimensions are addressed in other QI domains.

TITLE	DESCRIPTION	MDS 2.0 QUARTERLY VARIABLE DEFINITION	RISK ADJUSTMENT
22. Prevalence of daily physical restraints. 10.1A0051	Numerator: Residents who were physically restrained daily on most recent assessment. Denominators: All residents on most recent assessment.	MOST RECENT ASSESSMENT: Daily physical restraints (P4c or d or e =2).	No adjustment.
23. Prevalence of little or no activity. 10.2A0052	Numerator: Residents with little or no activity on most recent assessment. Denominator: All residents (excluding comatose) on most recent assessment.	MOST RECENT ASSESSMENT: Little or no activity (N2 =2 or 3). EXCLUDE: Residents who are comatose (B1=1).	No adjustment.

[illegible]

² Instructions relative to the completion of item I3 (ICD-9 codes) are ambiguous. Pending clarification from HCFA, we recommend that this item include all diagnoses, from the last 90 days that are related to current ADL status, cognitive status, mood and behavior status, medical treatments, nursing monitoring, or risk of death.

QI Glossary

Behavior problems. Defined as one or more of the following less than daily or daily: verbally abusive (E4b-Box A >0), physically abusive (E4c-Box A >0), or socially inappropriate/disruptive behavior (E4d-Box A >0).

Cognitive impairment. Any impairment in daily decision making ability (B4 >0) AND has short term memory problems (B2a=1).

Severe Cognitive Impairment. Decision making ability is severely impaired (B4=3) AND has short term memory problems (B2a=1)

DEPRESSION:

Symptoms of Depression:

Sad mood (E2=1 or 2) and [at least 2 symptoms of functional depression];

Symptoms of functional depression:

Symptom 1 distress (E1a=1or2-resident made negative statements);

Symptom 2 agitation or withdrawal (E1n =1or 2-repetitive physical movements), or (E4e-Box A = 1, 2, or 3-resists care), or (E1o=1or2-withdrawal from activity), or (E1p=1or 2-reduced social activity);

Symptom 3 wake with unpleasant mood (E1j =1 or 2), or not awake most of the day (N1d is checked), or awake 1 period of the day or less and not comatose (N1a+N1b +N1c \leq 1 and B1=0);

Symptom 4 suicidal or has recurrent thoughts of death (E1g=1 or 2);

Symptom 5 weight loss (K3a=1)

APPENDIX B

Updated September 1999

Example Reports